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NOTES ON WESTERN ATLANTIC PIPEFISHES WITH DESCRIPTION OF *SYNGNATHUS CARIBBAEUS* N. SP. AND *COSMOCAMPUS* N. GEN.

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Abstract.—The North Atlantic is shown to be the type locality of *Syngnathus pelagicus* Linnaeus. *Syngnathus rousseau* is a junior synonym of *S. pelagicus* and the so-called Caribbean Pipefish is described as *S. caribbaeus* n. sp. *Cosmocampus* n. gen. (type-species *Corythoichthys albirostris* Kaup) is proposed for western Atlantic species formerly referred to *Corythoichthys* Kaup.

A review of western Atlantic pipefishes is nearing completion but some delay in publication is anticipated. Certain matters pertinent to this review have been treated previously (Dawson, 1977a, 1977b, 1978; Dawson and Allen, 1978) and this report introduces new names and information which may be of immediate interest to other workers. I here discuss the type locality and distribution of *Syngnathus pelagicus,* describe the presently innominate "Caribbean Pipefish" (Herald, 1965) and diagnose a new genus to accommodate western Atlantic species formerly referred to *Corythoichthys* Kaup and provisionally transferred to *Syngnathus* Linnaeus by Dawson (1977a). Methods follow Dawson (1977a); materials examined are deposited in collections of the Field Museum of Natural History (FMNH), Gulf Coast Research Laboratory Museum (GCRL), Muséum National d'Histoire Naturelle, Paris (MNHN) and National Museum of Natural History, Smithsonian Institution (USNM).

Syngnathus pelagicus Linnaeus

Linnaeus (1758:337) described *S. pelagicus* from Osbeck (1757) and indicated the habitat, often accepted as the type locality, as "in Fuco natante." Jordan and Evermann (1896) cited Osbeck's locale as "open sea in floating seaweed," whereas Weber and de Beaufort (1922), Herald (1943) and others, apparently misled by the title of Osbeck's report, considered the type locality to be the East Indies. Reference to Osbeck (1757, 1771) shows clearly that his material was found among *Sargassum* (as *Fucus natans* or Sargazo) collected in the North Atlantic between 17.5°N, 37°21′W (of London) and 24.5°N, 39°09′W (of London) during the period 7–25 May 1752.

The Sargassum Pipefish has been reported from most temperate, sub-

tropical and tropical seas but actual distribution of this species is presently uncertain. Most early records from the Indo-Pacific and southeastern Atlantic (Kaup, 1856; Duméril, 1870; Günther, 1870) are questionable since most, if not all, specimens were probably collected from sailing ships returning to British or European ports. Weber and de Beaufort (1922) doubted the source of a specimen reportedly collected in the Moluccas and the origin of a specimen they report from the Celebes is also questionable. Fowler's (1940) record from Tierra del Fuego is based on a misidentified specimen of *Leptonotus blainvilleanus* (Eydoux and Gervais) and I have not found *Syngnathus pelagicus* among several hundred recent collections of pipefishes from New Zealand, Australia and the tropical Indo-Pacific. Studies on the distribution of this species are continuing, but present evidence suggests that *S. pelagicus* occurs, commonly, only in temperate-tropical Atlantic waters.

Syngnathus rousseau Kaup

Kaup (1856) described *Syngnathus rousseau* from a damaged male specimen sent to Paris from Martinique, without collection data, by A. Rousseau. The unfigured description was not diagnostic, lacked information on coloration and gave counts of 16 + 34 rings, 2 + 5 subdorsal rings and 10 caudal-fin rays. Subsequently, the name has been applied to the so-called Caribbean Pipefish (Herald, 1942, 1965) which is well represented in inshore insular and mainland collections from throughout the Caribbean Sea. The holotype (MNHN 6125) is about 115 mm SL, and in poor state of preservation; dorsal and pectoral fins are damaged or missing and no trace of original color remains. There are 16 + 33 rings, bony preorbital is reduced to a narrow septum, the opercular ridge crosses about half of the opercle, principal body ridges are well indented between rings, and the brood pouch extends below 13 tail rings. The remaining portion of the damaged anal fin extends nearly to the rear margin of the first tail ring and, when whole, probably reached to or near the middle of the second. Despite its poor condition, the combination of 49 total rings, prominent ridges, narrow preorbital and long anal fin indicates that the holotype of *S. rousseau* is conspecific with *S. pelagicus*. Since *S. rousseau* is a junior synonym of *S. pelagicus* and there is no other available name, the following description is provided for the Caribbean Pipefish.

Syngnathus caribbaeus, new species
Fig. 1

Holotype.—USNM 79703 (187.0 mm SL, female), Panamá, Colon, Fox Bay, 24–28 Apr. 1911, S. E. Meek and S. F. Hildebrand.

Paratypes.—Panamá: FMNH 8302 (1, 197); FMNH 8304 (1, 174); FMNH

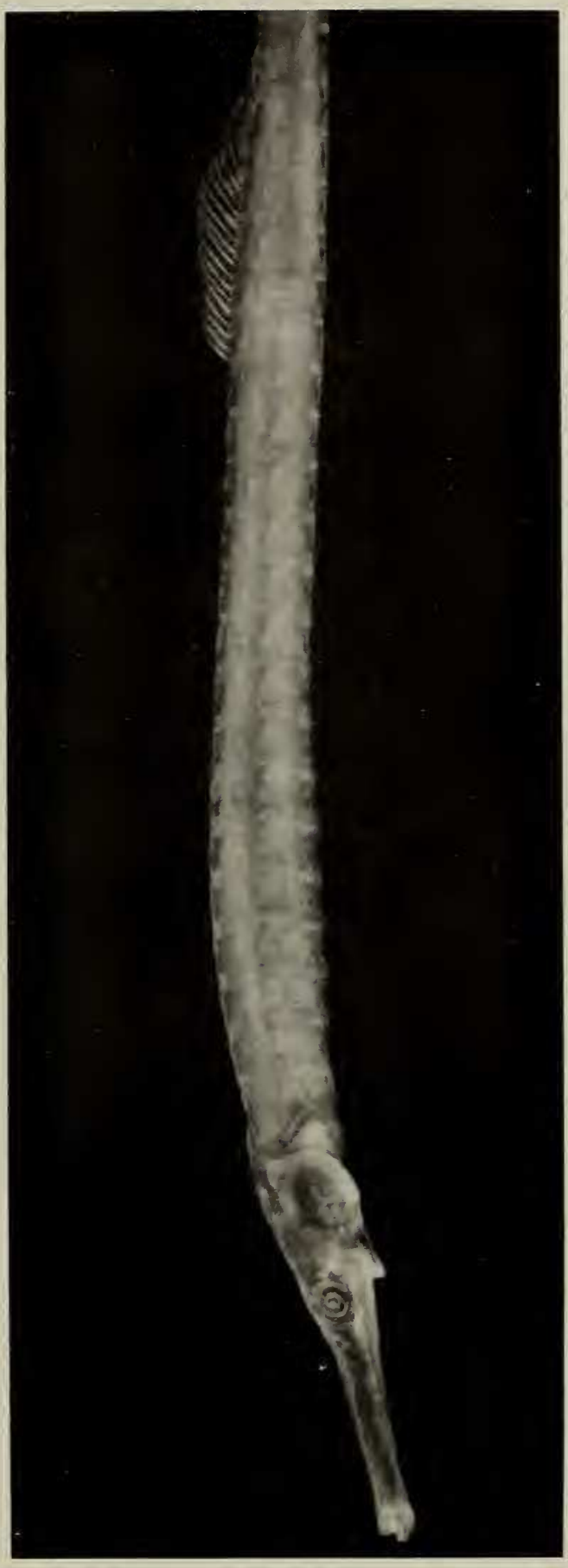

Fig. 1. *Syngnathus caribbaeus*. GCRL 1956 (170 mm SL, female, paratype). Atlantic Panamá.

8305 (1, 189); FMNH 8306 (1, 203); FMNH 8307 (1, 180); GCRL 1956 (1, 170); GCRL 14541 (1, 141); USNM 79697 (1, 191); USNM 79701 (2, 186–186.5). Venezuela: GCRL 15524 (2, 53–163); GCRL 15525 (1, ca. 190).

Diagnosis.—Total rings 48–52; total subdorsal rings 5.5–7.25; snout length averages 1.9 in head length; bony preorbital typically moderate, neither broad nor reduced to a narrow septum; anal fin short, reaches little beyond anterior margin of 2nd tail ring; without prominent dark bands on body.

Description.—Rings 15–18 + 31–35 (usually 17 + 33), dorsal-fin rays 25–32 (usually 28–30), subdorsal rings 2.5–1.0 + 3.5–5.75 (usually 2.0–1.5 + 4.25–5.0), pectoral-fin rays usually 13–14, caudal-fin rays 10, anal-fin rays 3. Counts and measurements (mm) of 187.0 mm SL, female, holotype (USNM 79703) follow: rings 17 + 34, dorsal-fin rays 29, subdorsal rings 1.5 + 5, pectoral-fin rays 14 (2), head length 23.0, snout length 12.0, snout depth 2.2., length of dorsal-fin base 19.3, anal ring depth 6.3, trunk depth 7.2, pectoral-fin length 4.3, length of pectoral-fin base 3.9. In alcohol, the holotype is mainly brown and there are traces of brownish bands on the dorsal fin. Other material often with brown lateral stripe on snout; body plain, mottled or with faint pale bars; dorsal fin plain or with indistinct brown bands in both sexes.

Comparisons.—Among western Atlantic congeners, this species (as noted by Herald, 1942, 1965) is similar to *S. floridae* and *S. pelagicus* in most meristic and morphometric features. It is best separated from *S. floridae* by the moderate width of bony preorbital (typically broad in *floridae*) and by a lower pectoral-fin length in HL ratio (averages 6.2 against 7.8). The moderate preorbital width and shorter anal fin separate *S. caribbaeus* from *S. pelagicus* wherein the preorbital is narrow or septum-like and the anal fin usually reaches to or beyond the middle of the 2nd tail ring. In addition, adult females have a slender trunk (deep in *pelagicus*), brooding males are infrequent under 100 mm SL (common at 75–80 mm in *pelagicus*) and *S. caribbaeus* reaches a larger size (at least 225 mm SL against ca. 180 in *pelagicus*). This species commonly frequents shallow inshore waters whereas *S. pelagicus* (except following storms) usually occurs in offshore or open sea collections.

Etymology.—Named *caribbaeus,* an adjective referring to the Caribbean distribution of the species.

Distribution.—Known from the Greater and Lesser Antilles and mainland coasts of Central and S. America from Belize to Venezuela.

Cosmocampus, new genus

Type-species.—*Corythoichthys albirostris* Kaup 1856.

Diagnosis.—Superior trunk and tail ridges discontinuous near rear of dor-

sal fin, inferior trunk and tail ridges continuous, lateral trunk and tail ridges discontinuous below dorsal-fin base. Snout length 1.7–3.8 in HL; median dorsal snout ridge low, entire to denticulate; median lateral snout ridge present or absent; median dorsal head ridges distinct to strongly elevated; supraopercular ridge present; opercle with complete or incomplete median ridge, usually prominent, often angled dorsad and margined with radiating striae; pectoral-fin base usually with 2 prominent ridges. Principal body ridges prominent, occasionally strongly elevated; ridge margins indented to deeply notched between rings; juvenile and adults often with posterior angles of tail rings produced as short spines; dermal flaps typically present in juveniles or adults. Trunk rings 15–18, total rings 40–57, dorsal-fin rays 19–27, pectoral-fin rays 10–15, anal-fin rays 2–4, caudal-fin rays typically 10. Dorsal-fin origin usually on trunk, fin base not elevated, total subdorsal rings 4.25–6.25. Brood pouch below 12–20 tail rings; pouch plates present; pouch closure not the inverted type of Herald (1959); without odontoid processes (Dawson and Fritzsche, 1975).

Comparisons.—The principal body ridge configuration of *Cosmocampus* is shared with several syngnathine (tail pouch) genera. This genus differs from *Syngnathus* sensu stricto in the presence of a supraopercular ridge and dermal flaps and in the absence of an inverted pouch closure. *Cosmocampus* differs from *Bryx* Herald in possessing an anal fin, from *Corythoichthys* Kaup in the presence of pouch plates and from *Bhanotia* Hora in lacking bony inclusions in opercular membranes and inverted pouch closure. Finally, *Cosmocampus* is differentiated from two nominal Australian genera by the absence of the elevated plate-like snout ridge characteristic of *Histiogamphelus* McCulloch, and by moderate snout length and lower trunk ring count (15–18 against 25–26) from the long-snouted monotypic *Hypselognathus* Whitley.

Etymology.—From the Greek *kosmos* (ornament or decoration) and *kampos* (sea-animal), in allusion to the ridges and dermal flaps decorating the head of the type-species; gender, masculine.

Remarks.—Two other western Atlantic species, *Syngnathus brachycephalus* Poey 1868 and *Corythoichthys profundus* Herald 1965, are also referred to *Cosmocampus*.

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